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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,720	03/17/2004	Kenta Shiga	501.43680X00	1880
24956 7590 03/23/2007 MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314			EXAMINER MEUCCI, MICHAEL D	
			ART UNIT	PAPER NUMBER
			2142	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/23/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/801,720	Applicant(s) SHIGA ET AL.	
	Examiner Michael D. Meucci	Art Unit 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9,10,12-16 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9,10,12-16 and 18-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This application has been reassigned to Michael Meucci.
2. Claims 1, 3-7, 9, 10,12-16, and 18-24 are currently pending.

### ***Claim Objections***

3. Regarding claim 9, the examiner presumes that the applicant meant to specify --the third device-- before "computers" on line 3 of the claim. Without it, the claim is a fragments and does not make sense.
4. Regarding claim 14, the full term --Explicit Congestion Notification-- should be used in place of "ECN."

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3, 4, 6, 7, 9, 10, 12-16, and 18-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al. (U.S. 6,259,705 B1) hereinafter referred to as Takahashi.

- a. Regarding claim 1, Takahashi teaches: a first device; a second device; a plurality of paths connected between the first device and the second device; and a third device which is connected to the first device (lines 18-36 of column 5), wherein the first

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device transfers data to the second device using the plurality of paths at a predetermined ratio defining a weighting of an amount of communications to be allocated among the plurality of paths so that communication loads among the plurality of paths are balanced (lines 18-36 of column 5), wherein the third device detects congestion of the plurality of paths and notifies the first device of the congestion (lines 31-36 of column 5), wherein the first device changes the predetermined ratio among the paths, thereby changing the weighting of an amount of communications to be allocated among the plurality of paths, based on notification from said third device of the congestion on the plurality of paths; wherein the first device transfers data to the second device using the plurality of paths according to the changed predetermined ratio (lines 34-36 of column 5); wherein said first device and the second device are storage devices (lines 5-11 of column 19); wherein the third device has information on the predetermined ratio and a change rate to be applied to the predetermined ratio to compute the changed predetermined ratio, when a change in the predetermined ratio is required (lines 28-36 of column 5); wherein the third device, when congestion of the plurality of paths has been detected, computes the changed predetermined ratio among paths based on the change rate, and sends information on the changed predetermined ratio to the first device (lines 28-36 of column 5); and wherein the first device transfers data to the second device using the plurality of paths based on the changed predetermined ratio among paths (lines 25-28 and lines 33-36 of column 5).

b. Regarding claim 4, Takahashi discloses: wherein each of the plurality of paths has a network device for connecting the first device and the second device (lines 55-60 of column 18).

c. Regarding claim 6, Takahashi teaches: wherein each of the plurality of paths has a network device for connecting the first device and the second device, wherein the third device is connected to the network device via a network, and wherein third device receives information on a discarded packet in the network device from the network device via the network and judges congestion of the plurality of paths based on the information on the discarded packet (lines 23-34 of column 2)

d. Regarding claim 7, Takahashi teaches: in the case in which the number of discarded packets received from the network device is larger than the number of discarded packets received previously, the third device judges that congestion has occurred in the plurality of paths having the network device (lines 6-15 of column 6).

e. Regarding claim 9, Takahashi teaches: when the third device detects recovery from congestion of the plurality of paths, computes the changed predetermined ration among the paths based on the changes rate, and sends information on the changed predetermined ratio among paths to the first device (lines 28-36 of column 5); and wherein the first device transfers data to the second device using a plurality of paths based on the changed predetermined ration among paths (lines 25-28 and lines 33-36 of column 5).

f. Claims 3, 10, 12, 13, 14 19, 20, and 21 contain similar limitations as those disclosed in claim 1 and are rejected under the same rationale.

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g. Regarding claim 15, Takahashi teaches: in the case in which a response is not returned from the second device for a predetermined period, the first device judges that congestion has occurred in the plurality of paths (lines 15-19 of column 6).

h. Regarding claim 16, Takahashi teaches: in the case in which an acknowledgement of the data sent to the second device has been received redundantly, the first device judges that congestion has occurred in the plurality of paths (lines 47-54 of column 9).

i. Regarding claim 18, Takahashi teaches: wherein, when a data size, which can be sent to the plurality of paths in which the congestion has occurred, has exceeded a value set in advance after the congestion occurrence, the first device judges that the plurality of paths has recovered from the congestion (lines 16-21 of column 11).

j. Claims 22-24 contain similar limitations as those disclosed in claims 15, 16, and 18 and are rejected under the same rationale.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi as applied to claim 1 above, in view of Bare (U.S. 6,456,597 B1).

a. Regarding claim 5, Takahashi does not explicitly teach: wherein the notification is a notification based upon SNMP trap. However, Bare discloses: "an implementation would block all the ports where it sees its own switch ID and log a message to the system manager and/or send an SNMP trap to any network management stations," (lines 56-59 of column 20). It would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to have a notification based upon SNMP trap. "Implementations that do not allow this could alternatively give the user a configuration parameter that turns off load balancing on some specific ports and allow the spanning-tree protocol to be run. This would allow the user still to configure the same topology with only a minor amount of required configuration," (lines 59-65 of column 20 in Bare). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have a notification based upon SNMP trap in the system as taught by Takahashi.

### ***Response to Arguments***

9. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Primak et al. (U.S. 6,389,448 B1) discloses load balancing in general.

Alonso et al. (U.S. 2003/0142628 A1) discloses adaptive load balancing.

Leigh (U.S. 2003/0158940 A1) discloses load balancing and monitoring of traffic.

Chauffour et al. (U.S. 2003/0236888 A1) discloses load balancing and monitoring of traffic.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Meucci at (571) 272-3892. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:00 PM.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell, can be reached at (571) 272-3868. The fax phone number for this Group is 571-273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [michael.meucci@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
ANDREW CALDWELL  
SUPERVISORY PATENT EXAMINER